



# MARINER NEPTUNO SUPER TURBO 15W-40

## Description

Multigrade marine lubricant that exceeds traditional S.H.P.D. feature levels. Specially formulated to comply with the demanding needs of modern, turbo and revolution, four-stroke diesel engines in water, under the most severe working conditions, in fishing vessels, leisure boats, auxiliary port vessels and merchant ships. They are specially suited for:

- For use in turbocharged, quick-revving trunk diesel engines intended for propulsion, in auxiliary groups and as emergency engines to generate electric current, as well as in engines requiring a lubricant of higher quality.
- Valid for engines that must comply with “EURO 3” and “EURO 4” regulations on low emission levels, and that run on light fuels with up to 1% sulphur content.

## Properties

- Avoids segment sticking by dispersing mud, varnishes and other high temperature oil oxidation products.
- Contains efficient corrosion, oxidation, rust and foam formation inhibitors.
- Avoids cylinder liner polishing typical in over-fuelled, high power engines, with the consequent reduction of specific consumption.
- Excellent detergent capacity that reduces deposits in valves and pistons.
- Very good dispersing qualities that prevents the appearance of mud when cold.
- A highly stable alkaline reserve (TBN) gives great capacity to neutralise the acids formed in the fuel.
- Good cold-flow which facilitates ignition and reduces engine wear.
- Highly stable multi-grade oil with excellent shear resistance.

## Quality levels, approvals and recommendations

- ACEA: E7/E9
- API: CI-4, CH-4/SL
- CATERPILLAR: CAT ECF-2/ECF-1-a
- MTU: Type 2



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## Technical specifications

	UNIT	METHOD	VALUE
SAE Grade			15W-40
Colour	-	ASTM D1500	5
Density at 15 °C	g/cm <sup>3</sup>	ASTM D4052	0.874
Viscosity at 100 °C	cSt	ASTM D445	14.8
Viscosity at 40 °C	cSt	ASTM D445	109
Viscosity at -20 °C	cP	ASTM D5293	<7,000
Viscosity index	-	ASTM D2270	141
Flash point, open cup	°C	ASTM D92	237
Pour point	°C	ASTM D97	-30
TBN	mg KOH/g	ASTM D2896	10.5
Bosch Injector Shearing: Viscosity at 100 °C	cSt	ASTM D3945	>12.5
Noack volatility, 1h at 250 °C	% in weight	DIN 51581	<12

The above mentioned characteristics are typical values and should not be considered product specifications.